

SEQUENCE LISTING

<110> Sheppard, Paul O.
Jelinek, Laura J.

<120> Mammalian Neuro-Growth Factor Like
Protein

<130> 97-28C1

<150> 09/099,295

<151> 1998-06-18

<150> 60/050,143

<151> 1997-06-18

<160> 24

<170> FastSEQ for Windows Version 4.0

<210> 1

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<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (69)...(887)

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Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val
1 5 10

ttg gca gtg ggc ggc aca gag cac gcc tac cgg ccc ggc cgt agg gtg 158
Leu Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val
15 20 25 30

tgt gct gtc cgg gct cac ggg gat cct gtc tcc gag tcg ttc gtg cag 206
 Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln
 35 40 45

cgt gtg tac cag ccc ttc ctc acc acc tgc gac ggg cac cgg gcc tgc 254
 Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys
 50 55 60

agc acc tac cga acc atc tat agg acc gcc tac cgc cgc agc cct ggg 302
 Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly
 65 70 75

ctg gcc cct gcc agg cct cgc tac gcg tgc tgc ccc ggc tgg aag agg 350
 Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg
 80 85 90

acc agc ggg ctt cct ggg gcc tgt gga gca gca ata tgc cag ccg cca 398
 Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro
 95 100 105 110

tgc cgg aac gga ggg agc tgt gtc cag cct ggc cgc tgc cgc tgc cct 446
 Cys Arg Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro
 115 120 125

gca gga tgg cgg ggt gac act tgc cag tca gat gtg gat gaa tgc agt 494
 Ala Gly Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser
 130 135 140

gct agg agg ggc ggc tgt ccc cag cgc tgc gtc aac acc gcc ggc agt 542
 Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser
 145 150 155

tac tgg tgc cag tgt tgg gag ggg cac agc ctg tct gca gac ggt aca 590
 Tyr Trp Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr
 160 165 170

ctc tgt gtg ccc aag gga ggg ccc ccc agg gtg gcc ccc aac ccg aca 638
 Leu Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr
 175 180 185 190

Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu Ala
1 5 10 15

Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala
 20 25 30
 Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val
 35 40 45
 Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr
 50 55 60
 Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
 65 70 75 80
 Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
 85 90 95
 Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
 100 105 110
 Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
 115 120 125
 Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
 130 135 140
 Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
 145 150 155 160
 Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
 165 170 175
 Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val
 180 185 190
 Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp
 195 200 205
 Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu
 210 215 220
 Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu
 225 230 235 240
 Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln
 245 250 255
 Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp
 260 265 270
 Ser

<210> 3

<211> 254

<212> PRT

<213> Homo sapiens

<400> 3

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His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro
 20 25 30
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr
 35 40 45
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
 50 55 60
 Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro
 65 70 75 80
 Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly
 85 90 95
 Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly
 100 105 110
 Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly
 115 120 125
 Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys
 130 135 140
 Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys
 145 150 155 160
 Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala
 165 170 175
 Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu Glu
 180 185 190
 Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Gln
 195 200 205
 Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu Val His Ser
 210 215 220
 Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe
 225 230 235 240
 Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp Ser
 245 250

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<212> DNA

<213> Homo sapiens

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<213> Homo sapiens
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<213> Homo sapiens
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<211> 708
<212> PRT
<213> Homo sapiens
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 Gly Pro Arg Gly Leu Tyr Ala Arg Gly Ala Arg Gly Val Ala Leu Cys
 20 25 30

Tyr	Ser	Ala	Leu	Ala	Val	Ala	Leu	Ala	Arg	Gly	Ala	Leu	Ala	His	Ile
		35					40					45			
Ser	Gly	Leu	Tyr	Ala	Ser	Pro	Pro	Arg	Val	Ala	Leu	Ser	Glu	Arg	Gly
	50					55					60				
Leu	Ser	Glu	Arg	Pro	His	Glu	Val	Ala	Leu	Gly	Leu	Asn	Ala	Arg	Gly
65					70					75					80
Val	Ala	Leu	Thr	Tyr	Arg	Gly	Leu	Asn	Pro	Arg	Pro	His	Glu	Leu	Glu
				85					90					95	
Thr	His	Arg	Thr	His	Arg	Cys	Tyr	Ser	Ala	Ser	Pro	Gly	Leu	Tyr	His
			100					105					110		
Ile	Ser	Ala	Arg	Gly	Ala	Leu	Ala	Cys	Tyr	Ser	Ser	Glu	Arg	Thr	His
		115					120					125			
Arg	Thr	Tyr	Arg	Ala	Arg	Gly	Thr	His	Arg	Ile	Leu	Glu	Thr	Tyr	Arg
		130				135						140			
Ala	Arg	Gly	Thr	His	Arg	Ala	Leu	Ala	Thr	Tyr	Arg	Ala	Arg	Gly	Ala
145					150					155					160
Arg	Gly	Ser	Glu	Arg	Pro	Arg	Gly	Leu	Tyr	Leu	Glu	Ala	Leu	Ala	Pro
				165					170					175	
Arg	Ala	Leu	Ala	Ala	Arg	Gly	Pro	Arg	Ala	Arg	Gly	Thr	Tyr	Arg	Ala
			180					185					190		
Leu	Ala	Cys	Tyr	Ser	Cys	Tyr	Ser	Pro	Arg	Gly	Leu	Tyr	Thr	Arg	Pro
		195						200				205			
Leu	Tyr	Ser	Ala	Arg	Gly	Thr	His	Arg	Ser	Glu	Arg	Gly	Leu	Tyr	Leu
	210					215						220			
Glu	Pro	Arg	Gly	Leu	Tyr	Ala	Leu	Ala	Cys	Tyr	Ser	Gly	Leu	Tyr	Ala
225					230					235					240
Leu	Ala	Ala	Leu	Ala	Ile	Leu	Glu	Cys	Tyr	Ser	Gly	Leu	Asn	Pro	Arg
				245					250					255	
Pro	Arg	Cys	Tyr	Ser	Ala	Arg	Gly	Ala	Ser	Asn	Gly	Leu	Tyr	Gly	Leu
			260					265					270		
Tyr	Ser	Glu	Arg	Cys	Tyr	Ser	Val	Ala	Leu	Gly	Leu	Asn	Pro	Arg	Gly
		275					280					285			
Leu	Tyr	Ala	Arg	Gly	Cys	Tyr	Ser	Ala	Arg	Gly	Cys	Tyr	Ser	Pro	Arg
	290					295					300				
Ala	Leu	Ala	Gly	Leu	Tyr	Thr	Arg	Pro	Ala	Arg	Gly	Gly	Leu	Tyr	Ala
305					310					315					320
Ser	Pro	Thr	His	Arg	Cys	Tyr	Ser	Gly	Leu	Asn	Ser	Glu	Arg	Ala	Ser
				325					330					335	
Pro	Val	Ala	Leu	Ala	Ser	Pro	Gly	Leu	Cys	Tyr	Ser	Ser	Glu	Arg	Ala
			340					345						350	

Leu	Ala	Ala	Arg	Gly	Ala	Arg	Gly	Gly	Leu	Tyr	Gly	Leu	Tyr	Cys	Tyr
		355					360					365			
Ser	Pro	Arg	Gly	Leu	Asn	Ala	Arg	Gly	Cys	Tyr	Ser	Val	Ala	Leu	Ala
	370					375					380				
Ser	Asn	Thr	His	Arg	Ala	Leu	Ala	Gly	Leu	Tyr	Ser	Glu	Arg	Thr	Tyr
385					390					395					400
Arg	Thr	Arg	Pro	Cys	Tyr	Ser	Gly	Leu	Asn	Cys	Tyr	Ser	Thr	Arg	Pro
			405						410					415	
Gly	Leu	Gly	Leu	Tyr	His	Ile	Ser	Ser	Glu	Arg	Leu	Glu	Ser	Glu	Arg
		420						425					430		
Ala	Leu	Ala	Ala	Ser	Pro	Gly	Leu	Tyr	Thr	His	Arg	Leu	Glu	Cys	Tyr
	435					440						445			
Ser	Val	Ala	Leu	Pro	Arg	Leu	Tyr	Ser	Gly	Leu	Tyr	Gly	Leu	Tyr	Pro
	450					455					460				
Arg	Pro	Arg	Ala	Arg	Gly	Val	Ala	Leu	Ala	Leu	Ala	Pro	Arg	Ala	Ser
465					470					475					480
Asn	Pro	Arg	Thr	His	Arg	Gly	Leu	Tyr	Val	Ala	Leu	Ala	Ser	Pro	Ser
				485					490					495	
Glu	Arg	Ala	Leu	Ala	Met	Glu	Thr	Leu	Tyr	Ser	Gly	Leu	Gly	Leu	Val
		500						505					510		
Ala	Leu	Gly	Leu	Asn	Ala	Arg	Gly	Leu	Glu	Gly	Leu	Asn	Ser	Glu	Arg
	515						520					525			
Ala	Arg	Gly	Val	Ala	Leu	Ala	Ser	Pro	Leu	Glu	Leu	Glu	Gly	Leu	Gly
	530					535					540				
Leu	Leu	Tyr	Ser	Leu	Glu	Gly	Leu	Asn	Leu	Glu	Val	Ala	Leu	Leu	Glu
545					550					555					560
Ala	Leu	Ala	Pro	Arg	Leu	Glu	His	Ile	Ser	Ser	Glu	Arg	Leu	Glu	Ala
				565					570					575	
Leu	Ala	Ser	Glu	Arg	Gly	Leu	Asn	Ala	Leu	Ala	Leu	Glu	Gly	Leu	His
		580						585					590		
Ile	Ser	Gly	Leu	Tyr	Leu	Glu	Pro	Arg	Ala	Ser	Pro	Pro	Arg	Gly	Leu
	595						600					605			
Tyr	Ser	Glu	Arg	Leu	Glu	Leu	Glu	Val	Ala	Leu	His	Ile	Ser	Ser	Glu
	610					615					620				
Arg	Pro	His	Glu	Gly	Leu	Asn	Gly	Leu	Asn	Leu	Glu	Gly	Leu	Tyr	Ala
625					630					635					640
Arg	Gly	Ile	Leu	Glu	Ala	Ser	Pro	Ser	Glu	Arg	Leu	Glu	Ser	Glu	Arg
				645					650					655	
Gly	Leu	Gly	Leu	Asn	Ile	Leu	Glu	Ser	Glu	Arg	Pro	His	Glu	Leu	Glu
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<212> PRT
<213> Homo sapiens
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<212> PRT
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<211> 256
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<213> Homo sapiens
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Arg Gly Val Ala Leu Ala Leu Ala Pro Arg Ala Ser Asn Pro Arg Thr
20 25 30

His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Ser Glu Arg Ala Leu
 35 40 45
 Ala Met Glu Thr Leu Tyr Ser Gly Leu Gly Leu Val Ala Leu Gly Leu
 50 55 60
 Asn Ala Arg Gly Leu Glu Gly Leu Asn Ser Glu Arg Ala Arg Gly Val
 65 70 75 80
 Ala Leu Ala Ser Pro Leu Glu Leu Glu Gly Leu Gly Leu Leu Tyr Ser
 85 90 95
 Leu Glu Gly Leu Asn Leu Glu Val Ala Leu Leu Glu Ala Leu Ala Pro
 100 105 110
 Arg Leu Glu His Ile Ser Ser Glu Arg Leu Glu Ala Leu Ala Ser Glu
 115 120 125
 Arg Gly Leu Asn Ala Leu Ala Leu Glu Gly Leu His Ile Ser Gly Leu
 130 135 140
 Tyr Leu Glu Pro Arg Ala Ser Pro Pro Arg Gly Leu Tyr Ser Glu Arg
 145 150 155 160
 Leu Glu Leu Glu Val Ala Leu His Ile Ser Ser Glu Arg Pro His Glu
 165 170 175
 Gly Leu Asn Gly Leu Asn Leu Glu Gly Leu Tyr Ala Arg Gly Ile Leu
 180 185 190
 Glu Ala Ser Pro Ser Glu Arg Leu Glu Ser Glu Arg Gly Leu Gly Leu
 195 200 205
 Asn Ile Leu Glu Ser Glu Arg Pro His Glu Leu Glu Gly Leu Gly Leu
 210 215 220
 Gly Leu Asn Leu Glu Gly Leu Tyr Ser Glu Arg Cys Tyr Ser Ser Glu
 225 230 235 240
 Arg Cys Tyr Ser Leu Tyr Ser Leu Tyr Ser Ala Ser Pro Ser Glu Arg
 245 250 255

<210> 12

<211> 331

<212> PRT

<213> Homo sapiens

<400> 12

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 Gly Pro Arg Gly Leu Tyr Ala Arg Gly Ala Arg Gly Val Ala Leu Cys
 20 25 30
 Tyr Ser Ala Leu Ala Val Ala Leu Ala Arg Gly Ala Leu Ala His Ile
 35 40 45

Ser Gly Leu Tyr Ala Ser Pro Pro Arg Val Ala Leu Ser Glu Arg Gly
 50 55 60
 Leu Ser Glu Arg Pro His Glu Val Ala Leu Gly Leu Asn Ala Arg Gly
 65 70 75 80
 Val Ala Leu Thr Tyr Arg Gly Leu Asn Pro Arg Pro His Glu Leu Glu
 85 90 95
 Thr His Arg Thr His Arg Cys Tyr Ser Ala Ser Pro Gly Leu Tyr His
 100 105 110
 Ile Ser Ala Arg Gly Ala Leu Ala Cys Tyr Ser Ser Glu Arg Thr His
 115 120 125
 Arg Thr Tyr Arg Ala Arg Gly Thr His Arg Ile Leu Glu Thr Tyr Arg
 130 135 140
 Ala Arg Gly Thr His Arg Ala Leu Ala Thr Tyr Arg Ala Arg Gly Ala
 145 150 155 160
 Arg Gly Ser Glu Arg Pro Arg Gly Leu Tyr Leu Glu Ala Leu Ala Pro
 165 170 175
 Arg Ala Leu Ala Ala Arg Gly Pro Arg Ala Arg Gly Thr Tyr Arg Ala
 180 185 190
 Leu Ala Cys Tyr Ser Cys Tyr Ser Pro Arg Gly Leu Tyr Thr Arg Pro
 195 200 205
 Leu Tyr Ser Ala Arg Gly Thr His Arg Ser Glu Arg Gly Leu Tyr Leu
 210 215 220
 Glu Pro Arg Gly Leu Tyr Ala Leu Ala Cys Tyr Ser Gly Leu Tyr Ala
 225 230 235 240
 Leu Ala Ala Leu Ala Ile Leu Glu Cys Tyr Ser Gly Leu Asn Pro Arg
 245 250 255
 Pro Arg Cys Tyr Ser Ala Arg Gly Ala Ser Asn Gly Leu Tyr Gly Leu
 260 265 270
 Tyr Ser Glu Arg Cys Tyr Ser Val Ala Leu Gly Leu Asn Pro Arg Gly
 275 280 285
 Leu Tyr Ala Arg Gly Cys Tyr Ser Ala Arg Gly Cys Tyr Ser Pro Arg
 290 295 300
 Ala Leu Ala Gly Leu Tyr Thr Arg Pro Ala Arg Gly Gly Leu Tyr Ala
 305 310 315 320
 Ser Pro Thr His Arg Cys Tyr Ser Gly Leu Asn
 325 330

<210> 13

<211> 158

<212> PRT

<213> Homo sapiens

<400> 13

Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala Val Arg Ala
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 His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro
 20 25 30
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr
 35 40 45
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
 50 55 60
 Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro
 65 70 75 80
 Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly
 85 90 95
 Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly
 100 105 110
 Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly
 115 120 125
 Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys
 130 135 140
 Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val
 145 150 155

<210> 14

<211> 73

<212> PRT

<213> Homo sapiens

<400> 14

Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
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 20 25 30
 Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys
 35 40 45
 Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu Gly His Ser
 50 55 60
 Leu Ser Ala Asp Gly Thr Leu Cys Val
 65 70

<210> 15

<211> 169

<212> PRT

<213> Homo sapiens

<400> 15

Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
 1 5 10 15
 Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln Ser
 20 25 30
 Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys
 35 40 45
 Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu Gly His Ser
 50 55 60
 Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly Gly Pro Pro Arg
 65 70 75 80
 Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala Met Lys Glu Glu Val
 85 90 95
 Gln Arg Leu Gln Ser Arg Val Asp Leu Leu Glu Glu Lys Leu Gln Leu
 100 105 110
 Val Leu Ala Pro Leu His Ser Leu Ala Ser Gln Ala Leu Glu His Gly
 115 120 125
 Leu Pro Asp Pro Gly Ser Leu Leu Val His Ser Phe Gln Gln Leu Gly
 130 135 140
 Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe Leu Glu Glu Gln Leu
 145 150 155 160
 Gly Ser Cys Ser Cys Lys Lys Asp Ser
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<210> 16

<211> 181

<212> PRT

<213> Homo sapiens

<400> 16

Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala Val Arg Ala
 1 5 10 15
 His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro
 20 25 30
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr
 35 40 45
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
 50 55 60

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<210> 17
<211> 293
<212> PRT
<213> Homo sapiens
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<400> 17
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Leu Leu Leu Leu Ile Pro Gly Glu Gly Ala Lys Gly Gly Ser Leu Arg
20 25 30
Glu Ser Gln Gly Val Cys Ser Lys Gln Thr Leu Val Val Pro Leu His
35 40 45
Tyr Asn Glu Ser Tyr Ser Gln Pro Val Tyr Lys Pro Tyr Leu Thr Leu
50 55 60
Cys Ala Gly Arg Arg Ile Cys Ser Thr Tyr Arg Thr Met Tyr Arg Val
65 70 75 80
Met Trp Arg Glu Val Arg Arg Glu Val Gln Gln Thr His Ala Val Cys
85 90 95
Cys Gln Gly Trp Lys Lys Arg His Pro Gly Ala Leu Thr Cys Glu Ala
100 105 110
Ile Cys Ala Lys Pro Cys Leu Asn Gly Gly Val Cys Val Arg Pro Asp
115 120 125
Gln Cys Glu Cys Ala Pro Gly Trp Gly Gly Lys His Cys His Val Asp
130 135 140

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<210> 18
<211> 1339
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (261)...(1094)
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<400> 18
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ctgtccctgt gggaagcccc cggcagcagc aagacgttg ctgttccacc tgcccacaag 180
aacagccacc accagtacc aggggatgac aagcggccgg accacaggcc aaaaaagaa 240
gaaggctacc ccacttacag atg cag acc atg tgg ggc tcc gga gaa ctg ctt 293
Met Gln Thr Met Trp Gly Ser Gly Glu Leu Leu
1 5 10

gta gca tgg ttt cta gtg ttg gca gca gat ggt act act gag cat gtc	341
Val Ala Trp Phe Leu Val Leu Ala Ala Asp Gly Thr Thr Glu His Val	
15 20 25	
tac aga ccc agc cgt aga gtg tgt act gtg ggg att tcc gga ggt tcc	389
Tyr Arg Pro Ser Arg Arg Val Cys Thr Val Gly Ile Ser Gly Gly Ser	
30 35 40	
atc tcg gag acc ttt gtg cag cgt gta tac cag cct tac ctc acc act	437
Ile Ser Glu Thr Phe Val Gln Arg Val Tyr Gln Pro Tyr Leu Thr Thr	
45 50 55	
tgc gac gga cac aga gcc tgc agc acc tac cga acc atc tac cgg act	485
Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr	
60 65 70 75	
gcc tat cgc cgt agc cct ggg gtg act ccc gca agg cct cgc tat gct	533
Ala Tyr Arg Arg Ser Pro Gly Val Thr Pro Ala Arg Pro Arg Tyr Ala	
80 85 90	
tgc tgc cct ggt tgg aag agg acc agt ggg ctc cct ggg gct tgt gga	581
Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly	
95 100 105	
gca gca ata tgc cag cct cca tgt ggg aat gga ggg agt tgc atc cgc	629
Ala Ala Ile Cys Gln Pro Pro Cys Gly Asn Gly Gly Ser Cys Ile Arg	
110 115 120	
cca gga cac tgc cgc tgc cct gtg gga tgg cag gga gat act tgc cag	677
Pro Gly His Cys Arg Cys Pro Val Gly Trp Gln Gly Asp Thr Cys Gln	
125 130 135	
aca gat gtt gat gaa tgc agt aca gga gag gcc agt tgt ccc cag cgc	725
Thr Asp Val Asp Glu Cys Ser Thr Gly Glu Ala Ser Cys Pro Gln Arg	
140 145 150 155	
tgt gtc aat act gtg gga agt tac tgg tgc cag gga tgg gag gga caa	773
Cys Val Asn Thr Val Gly Ser Tyr Trp Cys Gln Gly Trp Glu Gly Gln	
160 165 170	

agc cca tct gca gat ggg acg cgc tgc ctg tct aag gag ggg ccc tcc 821
 Ser Pro Ser Ala Asp Gly Thr Arg Cys Leu Ser Lys Glu Gly Pro Ser
 175 180 185

ccg gtg gcc cca aac ccc aca gca gga gtg gac agc atg gcg aga gag 869
 Pro Val Ala Pro Asn Pro Thr Ala Gly Val Asp Ser Met Ala Arg Glu
 190 195 200

gag gtg tac agg ctg cag gct cgg gtt gat gtg cta gaa cag aaa ctg 917
 Glu Val Tyr Arg Leu Gln Ala Arg Val Asp Val Leu Glu Gln Lys Leu
 205 210 215

cag ttg gtg ctg gcc cca ctg cac agc ctg gcc tct cgg tcc aca gag 965
 Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Arg Ser Thr Glu
 220 225 230 235

cat ggg cta caa gat cct ggc agc ctg ctg gcc cat tcc ttc cag cag 1013
 His Gly Leu Gln Asp Pro Gly Ser Leu Leu Ala His Ser Phe Gln Gln
 240 245 250

ctg gac cga att gat tca ctg agt gag cag gtg tcc ttc ttg gag gaa 1061
 Leu Asp Arg Ile Asp Ser Leu Ser Glu Gln Val Ser Phe Leu Glu Glu
 255 260 265

cat ctg ggg tcc tgc tcc tgc aaa aaa gat ctg tgataacctc tcaccacca 1114
 His Leu Gly Ser Cys Ser Cys Lys Lys Asp Leu
 270 275

ggctggatag agcagtcatt cctagatccc ttgtagccag agttcaggcg ctgtctggtg 1174
 gtgcctatga gcagaaggcc ctgcctcatt gtccctcttt cttaggaggt tcctaggact 1234
 tgggcatggg gagtggggtc ttgtgtgact cttcagtggg gctccctgtc taagtggtaa 1294
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<210> 19

<211> 278

<212> PRT

<213> Mus musculus

<400> 19

Met Gln Thr Met Trp Gly Ser Gly Glu Leu Leu Val Ala Trp Phe Leu
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Val Leu Ala Ala Asp Gly Thr Thr Glu His Val Tyr Arg Pro Ser Arg
 20 25 30
 Arg Val Cys Thr Val Gly Ile Ser Gly Gly Ser Ile Ser Glu Thr Phe
 35 40 45
 Val Gln Arg Val Tyr Gln Pro Tyr Leu Thr Thr Cys Asp Gly His Arg
 50 55 60
 Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser
 65 70 75 80
 Pro Gly Val Thr Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp
 85 90 95
 Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln
 100 105 110
 Pro Pro Cys Gly Asn Gly Gly Ser Cys Ile Arg Pro Gly His Cys Arg
 115 120 125
 Cys Pro Val Gly Trp Gln Gly Asp Thr Cys Gln Thr Asp Val Asp Glu
 130 135 140
 Cys Ser Thr Gly Glu Ala Ser Cys Pro Gln Arg Cys Val Asn Thr Val
 145 150 155 160
 Gly Ser Tyr Trp Cys Gln Gly Trp Glu Gly Gln Ser Pro Ser Ala Asp
 165 170 175
 Gly Thr Arg Cys Leu Ser Lys Glu Gly Pro Ser Pro Val Ala Pro Asn
 180 185 190
 Pro Thr Ala Gly Val Asp Ser Met Ala Arg Glu Glu Val Tyr Arg Leu
 195 200 205
 Gln Ala Arg Val Asp Val Leu Glu Gln Lys Leu Gln Leu Val Leu Ala
 210 215 220
 Pro Leu His Ser Leu Ala Ser Arg Ser Thr Glu His Gly Leu Gln Asp
 225 230 235 240
 Pro Gly Ser Leu Leu Ala His Ser Phe Gln Gln Leu Asp Arg Ile Asp
 245 250 255
 Ser Leu Ser Glu Gln Val Ser Phe Leu Glu Glu His Leu Gly Ser Cys
 260 265 270
 Ser Cys Lys Lys Asp Leu
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<210> 20

<211> 29

<212> PRT

<213> Mus musculus

<400> 20

Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg
1				5					10					15	
Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg			
			20					25							

<210> 21

<211> 32

<212> PRT

<213> Mus musculus

<400> 21

Gln	Pro	Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys
1				5					10					15	
Gln	Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln
			20					25					30		

<210> 22

<211> 37

<212> PRT

<213> Mus musculus

<400> 22

Cys	Val	Pro	Lys	Gly	Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly
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Val	Asp	Ser	Ala	Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val
			20					25					30		
Asp	Leu	Leu	Glu	Glu											
			35												

<210> 23

<211> 29

<212> PRT

<213> Mus musculus

<400> 23

Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Ile	Ser	Phe	Leu
1				5					10					15	
Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Ser			
			20					25							

<400> 24

Thr	Glu	His	Val	Tyr	Arg	Pro	Ser	Arg	Arg	Val	Cys	Thr	Val	Gly	Ile
1				5				10						15	
Ser	Gly	Gly	Ser	Ile	Ser	Glu	Thr	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro
			20					25					30		
Tyr	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr
		35					40					45			
Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Val	Thr	Pro	Ala	Arg
	50					55					60				
Pro	Arg	Tyr	Ala	Cys	Cys	Pro	Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro
65					70					75					80
Gly	Ala	Cys	Gly	Ala	Ala	Ile	Cys	Gln	Pro	Pro	Cys	Gly	Asn	Gly	Gly
				85					90					95	
Ser	Cys	Ile	Arg	Pro	Gly	His	Cys	Arg	Cys	Pro	Val	Gly	Trp	Gln	Gly
			100					105					110		
Asp	Thr	Cys	Gln	Thr	Asp	Val	Asp	Glu	Cys	Ser	Thr	Gly	Glu	Ala	Ser
		115					120					125			
Cys	Pro	Gln	Arg	Cys	Val	Asn	Thr	Val	Gly	Ser	Tyr	Trp	Cys	Gln	Gly
	130					135					140				
Trp	Glu	Gly	Gln	Ser	Pro	Ser	Ala	Asp	Gly	Thr	Arg	Cys	Leu	Ser	Lys
145					150					155					160
Glu	Gly	Pro	Ser	Pro	Val	Ala	Pro	Asn	Pro	Thr	Ala	Gly	Val	Asp	Ser
				165					170					175	
Met	Ala	Arg	Glu	Glu	Val	Tyr	Arg	Leu	Gln	Ala	Arg	Val	Asp	Val	Leu
			180					185					190		
Glu	Gln	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	Ser
		195					200					205			
Arg	Ser	Thr	Glu	His	Gly	Leu	Gln	Asp	Pro	Gly	Ser	Leu	Leu	Ala	His
	210					215					220				
Ser	Phe	Gln	Gln	Leu	Asp	Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Val	Ser
225					230					235					240
Phe	Leu	Glu	Glu	His	Leu	Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Leu	
				245					250					255	